

### IN THE SPECIFICATION

Please replace the paragraph starting on page 5, line 18 with the following paragraph:

The present invention concerns a method for deinterlacing a picture. The method generally comprises the steps of (A) calculating a plurality of differences among a plurality of current samples from a current field of the picture, the differences being calculated along a plurality of line segments at a plurality of angles proximate a particular position between two field lines from the current ~~field~~ field, (B) generating a first sample at the particular position by vertical filtering the current field in response to the differences indicating that the particular position is a non-edge position in the picture and (C) generating a second sample at the particular position by directional filtering the current field in response to the differences indicating that the particular position is an edge position in the picture.

Please replace the paragraph starting on page 7, line 25 with the following paragraph:

FIG. 1 is a block diagram of available fields;

FIG. 2 is a partial block diagram of an example current field;

FIG. 3 is a partial block diagram of an example previous field;

FIG. 4 is a block diagram of an example design for an apparatus implementing a preferred embodiment of the present invention;

FIG. 5 is a flow diagram for a deinterlacing method;

FIG. 6 is a diagram illustrating example detectable angles;

FIG. 7 is a diagram illustrating multiple line segments at a first angle;

FIG. 8 is a diagram illustrating multiple line segments at a second angle;

FIG. 9 is a diagram illustrating multiple line segments at a third angle; ~~and~~

FIG. 10 is a diagram of a blending factor; and

FIG. 11 is a diagram of a field at an outside boundary.

Please replace the paragraph starting on page 12, line 3 with the following paragraph:

For simplicity of description, the current field 100 may be considered as a top field and the neighboring (previous) field 102 may be considered as a bottom field of a frame. In general, the current field 100 comprises field lines 0, 2, 4, ...,  $2Z-2$ , and the previous field 102 comprises ~~field~~ field lines 1, 3, 5, ...,  $2Z-$

1, where  $Z$  is the number of available lines in each field. The deinterlacing generally constructs the "missing" lines in the current field 100 (e.g., lines 1, 3, 5, ...,  $2Z-1$ ) which, together with the available lines in current field 100, may form a complete frame of  $2Z$  lines.

Please replace the two paragraphs starting on page 14, line 11 with the following two paragraphs:

The decision circuit 126 may generate a signal (e.g., CNT) to the format conversion circuit ~~126~~ 124. The signal CNT may be implemented as one or more control signals. In one embodiment, the signal CNT may transfer information to force a vertical spatial filtering and to force a temporal filtering.

The format conversion circuit ~~126~~ 124 generally comprises a circuit (or module) 130, a circuit (or module) 132, a circuit (or module) 134 and a circuit (or module) 136. The circuit 130 may be implemented as a directional estimation circuit or block. The circuit 132 may be referred to as a deinterlacing circuit or block. The circuit 134 may be implemented as a motion compensation (MC) and/or VT-filter circuit or block. The circuit 136 may be implemented as a stationary check circuit or block.

Please replace the paragraph starting on page 21, line 12 with the following paragraph:

where  $a=u+2y-(L+1)$ ,  $b=v+((N-1)-2i)y+x+(L+1)i-M(N-1)$ ,  $c=u+2y-1$ ,  $d=v+((N-1)-2i)y+x+i-(N-1)$  and  $CUR(a,b)-CUR(c,d)$  is a difference between a first sample in the current ~~field~~ field 100 at a position  $(a,b)$  and a second sample in the current field 100 at a position  $(c,d)$ . The directional estimation circuit 130 may present the  $N$  arrays  $DIFF[i]$  (one array  $DIFF[i]$  for each of the  $N$  angles) to the deinterlacing circuit 132 in the signal  $INT1$ . The calculation of the arrays  $DIFFs$  generally impacts the cost of the computation.

Please replace the paragraph starting on page 23, line 8 with the following paragraph:

At the outside boundaries of the current field 100, a mirror principle may be applied to generate new pixels or new samples outside of the current field 100 as illustrated in FIG. 11. For example, the padding (or pad) sample at position  $(t,-1)$  is generally replaced by a sample at position  $(t,0)$ , the pad sample at position  $(t,-2)$  is generally replaced by the sample at position  $(t,1)$ , and so on. Other approaches for generating new samples outside the current field 100 may be implemented to meet the criteria of a particular application. For example, constant luminance values of a maximum value (e.g., 128) or a minimum value (e.g., 0) may be used for the pad samples outside the boundaries

(e.g., see columns t+1 and t+2). In another example, the samples at the inside edge of the field boundary may be copied and used as the new pad samples outside the boundary (e.g., see column t+3).